

## ABSTRACT OF THE DISCLOSURE

## FREQUENCY DIVIDER WITH FUNNEL STRUCTURE

In a frequency divider enabling the division by  $N$  of a frequency  $F_e$  and comprising at least one prescaler followed by a division chain, the prescaler has at least one input for the frequency signal  $F_e$  to be divided, one input for a command  $NA$  of the basic division rank of the prescaler and one input for a command  $\Delta NA$  coming from the division chain and enabling  $NA$  to be made to vary by one unit; the division chain comprises at least one division stage  $(K)$  comprising at least one divider by 2, giving a divided frequency  $F(K)$ , a switch controlled by the divider by 2, the switch having one input for a piece of programming data  $R(K)$ , one input for the carry signal  $RX(K+1)$  of the next stage and one output for the carry signal  $RX(K)$  for the previous stage. Application to the field of phase-locked loop frequency synthesis.